AMENDMENTS TO THE SPECIFICATION

Beginning on page 5, please amend paragraph 0018 as follows:

[0018] ~~Figure 5 is~~ Figures 5A and 5B depict a block diagram of a modular power converter providing AC to DC and DC to DC conversion.

Beginning on page 8, please amend paragraph 0028 as follows:

[0028] Referring to Figure 3, a power converter module 55 is shown in further detail. Each power converter module 55 includes input isolation, provided by a rectifier 101 and electromagnetic interference (EMI) filter 103, and a small amount of energy storage on the front end. Within each power converter module 55, the 3-phase AC input power is converted to DC through rectifier 101, which comprises six discrete diodes 105 in a bridge configuration. These diodes 105 may have individual heat sinks and may be cooled by forced air. The rectifier 101 feeds EMI filter 103, which comprises film capacitors 107 and small inductors 109. The EMI filter 103 provides rectified and filtered DC current to a plurality of half modules 111. Each half module 111 includes a phase shift bridge converter, output transformer, rectifiers and filtering, current feedback control, and protection circuits, as will be described hereinafter with reference to Figure 4. Power converter module 55 includes an optional DC input line 112, which allows the power converter module 55 to be used for either AC to DC conversion or DC to DC conversion, as will be discussed hereinafter with reference to ~~Figures 5 and 6~~ Figures 5A and 5B.

Beginning on page 11, please amend paragraph 0039 as follows:

[0039] The output rectifiers 155 are connected in half-wave center-tap configuration. This gives only one junction drop at a time for higher efficiency. One main inductor 169 is used for both sets of rectifiers 155 to use a common core size with the transformers 153. A single film capacitor 171 is used for output voltage filtering. The film capacitor 171 provides a fixed impedance for loop gain calculations, and

provides a T filter between the inductor 169 and the inductance of the wiring to the electrolyzer 19 (see Figure 1). Further ripple reduction may be achieved by running the two half modules 111 out of phase (a fixed offset on main clock 57 (see ~~Figure 5~~ Figures 5A and 5B), not to be confused with the phase control regulation).

Beginning on page 13, please amend paragraph 0044 as follows:

[0044] ~~Figure 5~~ Figures 5A and 5B depicts an alternative embodiment of the modular power electronics system 11. In this embodiment, an additional motherboard 201 is added to power converter box 51 for providing DC to DC conversion. Motherboard 201 includes a DC input from a DC power source 203. DC power source 203 may include, for example, an electrochemical cell (e.g., a fuel cell), a capacitor, a battery, a solar collector, or any other DC power source. The DC input is connected in parallel to a plurality of power converter modules 55, which are mounted to motherboard 201 in a similar manner as that described with reference to motherboard 53. As shown in Figure 3, the DC input line 112 may be used for providing the DC input to each module 55 on motherboard 201. The DC output of motherboard 201 is provided to, for example, electrolysis cell 19. Control of modules 55 on each motherboard 53 and 201 is provided by controller 15. It will be appreciated that the number of motherboards added to the system 11 is limited only by the size of the converter box 51 and processing limitations of controller 15. Thus, the modular power electronics system 11 is highly flexible, providing the ability to add many different converters to a single rack mountable converter box 51. Alternatively, a single motherboard could be configured to include the circuitry shown on motherboard 53 and motherboard 201, thus allowing a single motherboard to provide both AC to DC and DC to DC conversion.